

CLAIMS

1. A process for producing an immunoadsorbant material, a surface of which comprises a molecule which incorporates at least a binding site of an antibody, which process comprises the step of exposing a solid surface of a material to a solution of a molecule which incorporates at least the binding site of an antibody such that the molecule adsorbs onto said surface, characterised in that said molecule is an antibody fragment attached through a covalent chemical bond to a second protein, which is not the remainder of the corresponding antibody.
2. A process as claimed in claim 1, wherein said molecule is a fusion protein whereby said antibody fragment is attached to said second protein through a peptide bond.
3. A process as claimed in claim 1, wherein said antibody fragment is chemically conjugated to said second protein.
4. A process as claimed in any one of the preceding claims wherein the material is selected from: polystyrene; polypropylene; polyvinylchloride; nylon; polyester; cotton; a metal; carbon; glass; silica; nitrocellulose; latex.
5. A process as claimed in any one of the preceding claims, wherein the second protein has a molecular weight of at least 3000 or 5000 Daltons.
6. A process as claimed in any one of the preceding claims wherein the second protein is catalytically inactive.

7. A process as claimed in claim 6, wherein the second protein is selected from serum albumin; ovalbumin; a hydrophobin; lactoglobulin; haemoglobin; GFP.
- 5 8. Use of a protein which is attached through a covalent bond to an antibody fragment including at least the binding site of the antibody, where the attached protein is not the remainder of the corresponding whole antibody, to enhance retention of the antibody fragment's specific binding
10 affinity, upon adsorption to a solid surface.
9. Use as claimed in claim 8 in a process for producing an immunoabsorbant material.
- 15 10. An immunoabsorbant material obtainable by the process of any one of claims 1 to 7.
11. An immunoabsorbant material as claimed in claim 10 having a specific binding activity of greater than 0.1, 0.2, 0.3,
20 0.4, or 0.5%.
12. An immunoabsorbant material as claimed in claim 10 or claim 11 which constitutes all or part of: a microtitre plate; a flask; an immunoaffinity column; a polymeric beads; a
25 dipstick.
13. Use of a material as claimed in any one of claims 10 to 12 in an *in vitro* immunological recognition process.
- 30 14. Use as claimed in claim 13, wherein the immunological recognition process comprises the steps of:

(a) exposing a solution of a molecule which is an antibody fragment which incorporates at least the binding site of an antibody attached through a covalent chemical bond to a second protein which is not the remainder of the corresponding antibody, to a solid surface, whereby the molecule adsorbs onto said surface,

(b) exposing said surface to a solution for binding of a target material from said solution onto said antibody binding site attached to said surface.

15. Use as claimed in claim 13 or claim 14, wherein the immunological recognition process is an enzyme linked immuno-specific assay procedure (ELISA).

16. Use of a material as claimed in any one of claims 10 to 12 in a purification procedure.

17. A diagnostic test kit comprising a material as claimed in any one claims 10 to 12.